

REMARKS

Claims 1-13 are pending in this application. Claims 1, 10 and 12 have been amended. No new matter has been added by way of these amendments, because each amendment is supported by the present specification. For example, the amendments to claims 1 and 10 are supported by the present specification at page 3, lines 4-6, and the paragraph bridging pages 3-4. The dependency of claim 12 has been changed, where support in the specification is found on page 12, lines 2-10. Thus, no new matter has been added.

Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Issues Under 35 U.S.C. § 112, First Paragraph

Claims 10, 12/10 and 13 stand rejected under 35 U.S.C. § 112, first paragraph, because the specification is asserted to not enable the full scope of the presently pending claims. Applicants respectfully traverse.

Applicants respectfully refer the Examiner to amended claim 10, whereby this claim recites the coating composition as comprising the aqueous fluoroelastomer dispersion and a basic salt of a compound

containing at least two hydroxyl groups. Further, in claim 10, the aqueous fluoroelastomer dispersion "comprises fluorine-containing elastic copolymer having repeating units represented by the formula: -CH₂- in the backbone." The Office Action states that the specification enables these components (at page 3). NO

Thus, Applicants respectfully submit that the specification does enable the presently considered claims. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Issues Under 35 U.S.C. § 112, Second Paragraph

Claims 10, 12/10 and 13 stand rejected under 35 U.S.C. § 112, second paragraph, for reasons of indefiniteness. Applicants respectfully traverse. OK

Because of the amendment to claim 10 and the above remarks presented under "Issues Under 35 U.S.C. § 112, First Paragraph", Applicants respectfully submit that this rejection is rendered moot. Thus, Applicants respectfully request the Examiner to withdraw this rejection.

Objection to Claims

Claims 10 and 12/10 stand objected as they depend on withdrawn subject matter. Applicants respectfully traverse because claim 10 has

been amended into independent form. Claim 12 has also been amended to depend on claim 10. Applicants respectfully request withdrawal of this objection. 812

Issues Under 35 U.S.C. § 102(b)

Claims 10, 12/10 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent Application No. EP 0 690 096 A1 (hereinafter "EP '096") (Office Action states that EP '096 is equivalent to U.S. Patent 5,700,861, or Tomihashi '861, and Japanese Application No. 6-264021 A, or JP '021). Applicants respectfully traverse.

The EP '096 reference discloses a fluororubber coating composition having a fluororubber having -CH₂- groups in the main chain, a fluoropolyether oil having a functional group capable of bonding to the fluororubber upon heating, a vulcanizing agent, a vulcanizing assistant, and a medium. The Examiner refers Applicants to page 4, lines 4-6 for disclosure of a curing agent.

However, Applicants respectfully submit that EP '096 fails to disclose all features as instantly claimed (i.e., as recited in claim 10). EP '096 merely discloses the polyamine curing agent in the Examples (starting at page 5). 7

Further, EP '096 is admitted as not disclosing all features of the present invention under paragraph 15, page 5 of the Office Action.

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Therefore, because "a claim is only anticipated if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," EP '096 cannot be a basis for a rejection under § 102(b). See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Thus, because of the lack of disclosure of all claimed features, the rejection in view of EP '096 is overcome.

Issues Under 35 U.S.C. § 103(a)

Claims 10, 12/10 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EP '096 in view of Examiner's notice. The Examiner has taken notice that "the sodium salt of bisphenol AF would be one of the well-known metal salts of bisphenol AF used in curing fluororubbers" (see Office Action at paragraph 15, page 5). Applicants respectfully traverse.

The Present Invention and Its Advantages

Methods for curing an aqueous fluoroelastomer coating composition with a polyamine curing agent is known (see specification at page 1 in the "Background Art" section). Such methods can lead to good mechanical characteristics. However, there also drawbacks. Such disadvantages of these conventional methods include low sealing properties and the insufficient elasticity and heat resistance when the composition is used

to coat the surface of a roll used in office automation equipment. Further, many coating compositions that are produced have adverse effects on the environment.

In contrast to these conventional methods and coating compositions, the present invention has achieved a one-fluid type aqueous curable coating composition that leads to a cured product having good flexibility (i.e., low 100% modulus and large elongation at break).

Specifically, the present invention is directed to an article wherein at least a part of the surface of the article is coated with a coating layer formed from an aqueous fluoroelastomer curable coating composition. The claimed coating composition has an aqueous fluoroelastomer dispersion and a basic salt of a compound containing at least two hydroxyl groups as a curing agent. The aqueous fluoroelastomer dispersion has a fluorine-containing elastic copolymer having repeating units represented by the formula $-CH_2-$ in the backbone.

The unexpected advantages of the present invention have also been experimentally confirmed. The present invention has achieved better 100% modulus, tensile strength and elongation at break over conventional coating compositions (see Table 1, page 16 of the specification). Better adhesion and mechanical properties have also been produced as a result of the present invention (see Table 2, page 22 of the specification).

However, the cited combination of EP '096 and the Examiner's notice fails to disclose the features and advantages of the present invention.

Distinctions over EP '096 in view of Examiner's Notice

Applicants respectfully submit that a *prima facie* case of obviousness has not been established with respect to the asserted combination of EP '096 and the Examiner's Notice, because not all requirements for a *prima facie* case of obviousness have been satisfied.

U.S. case law squarely holds that a proper obviousness inquiry requires consideration of three factors: (1) the prior art reference (or references when combined) must teach or suggest all the claim limitations; (2) whether or not the prior art would have taught, motivated, or suggested to those of ordinary skill in the art that they should make the claimed invention (or practice the invention in case of a claimed method or process); and (3) whether the prior art establishes that in making the claimed invention (or practicing the invention in case of a claimed method or process), there would have been a reasonable expectation of success. See *In re Vaeck*, 947 F.2d, 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); see also *In re Kotzab*, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000); *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988).

In other words, the cited references must disclose or teach all features as claimed. In addition, the references themselves must state the motivation or suggestion to combine the references, and one having

ordinary skill in the art must reasonably expect to be successful in achieving the present invention upon reading the references.

In applying case law such as *In re Vaeck* and *In re Kotzab*, a *prima facie* case of obviousness has not been established.

First, as admitted, EP '096 fails to disclose all features as instantly claimed. Second, the Examiner's notice does not account for the deficiencies of EP '096.

Applicants respectfully traverse the Examiner's notice that "the sodium salt of bisphenol AF would be one of the well known metal salts of bisphenol AF used in curing fluororubbers" (see Office Action at paragraph 15, page 5). No citation of a reference or literature (*i.e.*, evidence) has been provided to establish this conclusion. Thus, Applicants respectfully submit that a *prima facie* case of obviousness has not been established because not all requirements for a *prima facie* case of obviousness has been satisfied (*i.e.*, the asserted combination discloses all features as instantly claimed). Accordingly, Applicants further submit that the burden of proving patentability has not shifted to Applicants.

In addition, Applicants respectfully submit that the present invention is patentable over the asserted combination because of the existence of unexpected results. The present invention uses a basic salt of a compound containing at least two phenolic hydroxyl groups as a curing agent. The recited compound is not a simple polyol compound.

The use of the specific basic salt makes it possible to provide a one-fluid type aqueous fluoroelastomer curable coating composition. As mentioned, the present invention achieves a cured product having good flexibility, i.e., low 100% modulus and large elongation at break. Those effects are experimentally confirmed by the Examples in the specification.

In contrast, such advantages cannot be predicted from EP '096. In other words, the existence of unexpected results rebuts any asserted *prima facie* case of obviousness with regard to EP '096 and the Examiner's notice.

Accordingly, Applicants respectfully submit that the burden of proving patentability has not properly shifted to Applicants. Applicants further submit that the present invention is patentably distinguishable from the cited combination of EP '096 and the Examiner's Notice. Thus, Applicants respectfully request the Examiner to reconsider and to withdraw all rejections and the objection and allow the currently pending claims.

A full and complete response has been made to all issues as cited in the Office Action. Thus, Applicants respectfully request that the Examiner pass the application to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to

contact Eugene T. Perez (Reg. No. 48,501) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

Pursuant to 37 C.F.R. § 1.17 and 1.136(a), Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application. The required fee of \$920.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

(Rev. 02/20/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Twice Amended) An aqueous fluoroelastomer curable coating composition comprising an aqueous fluoroelastomer dispersion and a [basic polyol curing agent.] basic salt of a compound containing at least two hydroxyl groups as a curing agent, wherein said aqueous fluoroelastomer dispersion in said coating composition comprises a fluorine-containing elastic copolymer having repeating units represented by the formula: -CH₂- in the backbone.

10. (Twice Amended) An article wherein at least a part of the surface of said article [of which] is coated with a coating layer formed from [the] an aqueous fluoroelastomer curable coating composition; [according to claim 1.]

wherein said coating composition comprises an aqueous fluoroelastomer dispersion and a basic salt of a compound containing at least two hydroxyl groups as a curing agent;

wherein said aqueous fluoroelastomer dispersion comprises fluorine-containing elastic copolymer having repeating units represented by the formula: -CH₂- in the backbone.

12. (Amended) The article according to claim [10 or 11,] 10,
[which] wherein said article is a roll for office automation equipment.